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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

MCCLOUD, RENATA D

ART UNIT PAPER NUMBER

2837

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,088

Applicant(s)

RODNEY, PAUL F.

Examiner

Renata McCloud

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 40 objected to because of the following informalities:
 - (a) Claim 31, 34, 37, and 42: The limitations "received acoustic signals" and "received acoustic noise signals" have insufficient antecedent basis in the claim.
 - (b) Claim 40: The limitation "acoustic sensor" has insufficient antecedent basis in the claim.Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 30-43 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
 - ✓(a) Claims 30-43: The claim limitation "first and second threaded ends" is not described in the specification.
 - (b) Claim 40: The limitation "acoustic sensor" is not described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. .

5. Claims 30-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 30-43: The term "substantially" in the claims is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 30-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Leggett, III et al (U.S. Patent 6,088,294).

Leggett, III et al teach:

Claims 30 and 41: An apparatus for conducting acoustic logging measurements of formation surrounding an earth borehole (Fig. 1), comprising: an acoustic logging instrument (Fig. 1) comprising an acoustic transmitter for transmitting acoustic signals into the formations surrounding an earth borehole (e.g. Fig. 8:452a), an acoustic receiver for receiving acoustic

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Col. 15
44-
signals returning from said formations and which may also respond to noise signals (e.g. Fig. 8:456), one or more sensors (at least two sensors referring to claim 41) responsive only to noise signals (Fig. 2:152), and an electronic processor for combining the signals received by the acoustic receiver and by the noise sensor (Fig. 8:450).

Claims 33 and 36: An apparatus for conducting acoustic logging measurements of formation surrounding an earth borehole (Fig. 1), comprising: an acoustic logging instrument (Fig. 1) comprising an acoustic transmitter for transmitting acoustic signals into the formations surrounding an earth borehole (e.g. Fig. 8:452a), at least two acoustic receivers for receiving acoustic signals returning from said formations and which may also respond to noise signals (e.g. Fig. 8:456), one or more sensors (at least two sensors referring to claim 36) responsive only to noise signals (Fig. 2:152), and an electronic processor for combining the signals received by the acoustic receiver and by the noise sensor (Fig. 8:450).

Claims 31, 34, 37, and 42: the electronic processor comprises an analog-to-digital converter (Fig. 8:460) and the received acoustic signals returning from the earth formation and the received acoustic noise signals are converted from analog to digital form prior to being combined to produce signals free of the influences of the noise signals (Col. 15:44-54).

Claims 32, 35, 38, and 43: circuitry for generating a propagation factor relating to the propagation of noise signals between the noise sensor and the acoustic receiver, and for modifying the noise signals based upon the propagation factor prior to being combined with the acoustic signals returning from the earth formations to produce signals free of the influences of said noise signals (Col. 7:26-40).

Claim 39: each of the noise sensors is positioned within the logging instrument to detect noise signals propagating towards the said sensors (Fig.2: 152 in 59).

Claim 40: at least one of the noise sensors is positioned to detect a noise signal propagating from above and toward, and at least another of the noise sensors is positioned to detect a noise signal propagating from below and toward (e.g. Col. 10:59-10).

Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.-Thurs and every other Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud
Examiner
Art Unit 2837

RDM
March 7, 2003


ROBERT E. NAPPI
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